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Titolo	Chemical reactions and their control on the femtosecond time scale [[electronic resource]] : XXth Solvay Conference on Chemistry / / edited by Pierre Gaspard and Irene Burghardt
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Altri autori (Persone)	GaspardPierre <1959-> BurghardtIrene
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Nota di contenuto	Advances in CHEMICAL PHYSICS; CONTENTS; OPENING REMARKS; FEMTOCHEMISTRY: FROM ISOLATED MOLECULES TO CLUSTERS; FEMTOCHEMISTRY: CHEMICAL REACTION DYNAMICS AND THEIR CONTROL; COHERENT CONTROL WITH FEMTOSECOND LASER PULSES; GENERAL DISCUSSION ON FEMTOCHEMISTRY: FROM ISOLATED MOLECULES TO CLUSTERS; FEMTOCHEMISTRY: FROM CLUSTERS TO SOLUTIONS; SIZE-DEPENDENT ULTRAFAST RELAXATION PHENOMENA IN METAL CLUSTERS; FEMTOSECOND CHEMICAL DYNAMICS IN CONDENSED PHASES; FEMTOSECOND LASER CONTROL OF ELECTRON BEAMS FOR ULTRAFAST DIFFRACTION; GENERAL DISCUSSION ON FEMTOCHEMISTRY: FROM CLUSTERS TO SOLUTIONS LASER CONTROL OF CHEMICAL REACTIONSPERSPECTIVES ON THE CONTROL OF QUANTUM MANY-BODY DYNAMICS: APPLICATION TO CHEMICAL REACTIONS; EXPERIMENTAL OBSERVATION OF LASER CONTROL: ELECTRONIC BRANCHING IN THE PHOTODISSOCIATION OF

Na2; COHERENT CONTROL OF BIMOLECULAR SCATTERING; LASER HEATING, COOLING, AND TRANSPARENCY OF INTERNAL DEGREES OF FREEDOM OF MOLECULES; RAMIFICATIONS OF FEEDBACK FOR CONTROL OF QUANTUM DYNAMICS; THEORY OF LASER CONTROL OF VIBRATIONAL TRANSITIONS AND CHEMICAL REACTIONS BY ULTRASHORT INFRARED LASER PULSES
TIME-FREQUENCY AND COORDINATE-MOMENTUM WIGNER WAVEPACKETS IN NONLINEAR SPECTROSCOPYGENERAL DISCUSSION ON LASER CONTROL OF CHEMICAL REACTIONS; INTRAMOLECULAR DYNAMICS; SOLVENT DYNAMICS AND RRKM THEORY OF CLUSTERS; HIGH-RESOLUTION SPECTROSCOPY AND INTRAMOLECULAR DYNAMICS; GENERAL DISCUSSION ON INTRAMOLECULAR DYNAMICS; REGULAR AND IRREGULAR FEATURES IN UNIMOLECULAR SPECTRA AND DYNAMICS; INTRAMOLECULAR DYNAMICS IN THE FREQUENCY DOMAIN; EMERGENCE OF CLASSICAL PERIODIC ORBITS AND CHAOS IN INTRAMOLECULAR AND DISSOCIATION DYNAMICS
GENERAL DISCUSSION ON REGULAR AND IRREGULAR FEATURES IN UNIMOLECULAR SPECTRA AND DYNAMICSMOLECULAR RYDBERG STATES AND ZEKE SPECTROSCOPY; ZEKE SPECTROSCOPY; SEPARATION OF TIME SCALES IN THE DYNAMICS OF HIGH MOLECULAR RYDBERG STATES; GENERAL DISCUSSION ON MOLECULAR RYDBERG STATES AND ZEKE SPECTROSCOPY: PART I; FROM RYDBERG STATE DYNAMICS TO ION-MOLECULE REACTIONS USING ZEKE SPECTROSCOPY; QUANTUM DEFECT THEORY OF THE DYNAMICS OF MOLECULAR RYDBERG STATES; SUBPICOSECOND STUDY OF BUBBLE FORMATION UPON RYDBERG STATE EXCITATION IN CONDENSED RARE GASES
GENERAL DISCUSSION ON MOLECULAR RYDBERG STATES AND ZEKE SPECTROSCOPY: PART IITRANSITION-STATE SPECTROSCOPY AND PHOTODISSOCIATION; PHOTODISSOCIATION SPECTROSCOPY AND DYNAMICS OF THE VINOXY (CH2CHO) RADICAL; RESONANCES IN UNIMOLECULAR DISSOCIATION: FROM MODE-SPECIFIC TO STATISTICAL BEHAVIOR; PHOTODISSOCIATING SMALL POLYATOMIC MOLECULES IN THE VUV REGION: RESONANCES IN THE 1E+ - 1E+ BAND OF OCS; PHASE AND AMPLITUDE IMAGING OF EVOLVING WAVEPACKETS BY SPECTROSCOPIC MEANS; GENERAL DISCUSSION ON TRANSITION-STATE SPECTROSCOPY AND PHOTODISSOCIATION; REACTION RATE THEORES RECENT ADVANCES IN STATISTICAL ADIABATIC CHANNEL CALCULATIONS OF STATE-SPECIFIC DISSOCIATION DYNAMICS

Sommario/riassunto

Continuing the tradition of the Advances in Chemical Physics series, Volume 101: Chemical Reactions and Their Control on the Femtosecond Time Scale details the extraordinary findings reported at the XXth Solvay Conference on Chemistry, held at the Universite Libre de Bruxelles, Belgium, from November 28 to December 2, 1995. This new volume discusses the remarkable opportunities afforded by the femtosecond laser, focusing on the host of phenomena this laser has made it possible to observe. Examining molecules on the intrinsic time scale of their vibrations as well as their dissociative motions

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Titolo	Recent Advances in Nanomagnetism
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Sommario/riassunto	The Special Issue on Recent Advances in Nanomagnetism is a compilation of articles, addressing various aspects of magnetic properties and behaviour in low dimensional magnetic materials. One contribution addresses the novel magnetic properties in a nanohybrid of iron oxide and carbide nanoparticles grown in diamond. Magnetic textures, such as skyrmion structures, form an important area of research in nanomagnetism, this forms the topic of another contribution. Several aspects of magnetisation dynamics are addressed in other contributions and relate to the developments of microresonators and microantennas applied to the study of magnetic nanostructures; the ferromagnetic resonance behaviour in nanodot systems are also considered. Materials development forms an important area of study in nanomagnetism, and, as such, the preparation conditions, such as annealing under an applied field, can have important effects on the magnetic properties of thin films and low dimensional structures. Such considerations form the study of one of the contributions. Perpendicular magnetic anisotropy has a number of important applications in magnetic storage materials; this is the subject of two further contributions.